

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

<i>IN RE:</i> INTERCONTINENTAL	§	Lead Case No. 4:19-cv-01460
TERMINALS COMPANY LLC	§	
DEER PARK FIRE LITIGATION	§	

***BRYANT PLAINTIFFS’ RESPONSE IN OPPOSITION TO DEFENDANTS
INTERCONTINENTAL TERMINALS COMPANY LLC AND NSK
CORPORATION’S MOTION TO EXCLUDE PLAINTIFFS’ AIR MODELING
EXPERT WILLIAM AUBERLE***

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MEMORANDUM OF POINTS AND AUTHORITIES

I.

INTRODUCTION

Bryant Plaintiffs, individually and on behalf of all others similarly situated, through undersigned counsel, respectfully submit this Response in opposition to Defendants Intercontinental Terminals Company LLC and NSK Corporation's [1309] Motion to exclude *Bryant* Plaintiffs' air modeling expert William Auberle. In accordance with Rule 702 of the Federal Rule of Evidence, the decision in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993) and for the reasons set forth in this Response, the opinions of expert William Auberle are relevant, reliable, and should not be excluded by the Court.

This case concerns a fire that ignited on March 17, 2019, at approximately 10:00 am, at the Intercontinental Terminals Company LLC ("ITC") complex located in La Porte, Texas. The initial fire in Tank 80-08 spread to adjacent and nearby tanks. A total of 15 tanks and their contents were destroyed by the fires, which were ultimately suppressed at approximately 3:00 am on March 20, 2019. The materials stored in the tanks included naptha, xylene and numerous other petroleum feedstocks and products. Two of the tanks were empty at the time of the fires. Air pollutant emissions from the burning of the other 13 tanks were estimated by ITC and documented in the Texas Commission on Environmental Quality (TCEQ) Air Emission Event Report Incident 304871.¹

The *Bryant* Plaintiffs retained William Auberle, an engineer with over fifty years of experience in atmospheric dispersion, including regulatory, consulting, and academic experience, to analyze the fate and transport of the particulate matter emitted during the 65-hour period of the

¹ See Exhibit A: Expert Report of William Auberle at pg. 2.

initial tank fires.² Although the fire intensity and resulting pollution certainly varied over this period, average emissions rates over this period were used to estimate air pollution deposition and inhalation exposures in accordance with the norms of air modeling science.³

Applying his knowledge, training, and expertise, Mr. Auberle selected the AERMOD model—one of the EPA’s preferred and recommended dispersion modeling programs⁴—as the appropriate dispersion model to estimate atmospheric particulate concentrations and particle deposition from the fires.⁵ He also selected inputs for the modeling (discussed below) based on information available from ITC and the TCEQ. Ultimately, Defendants’ expert Dr. Zannetti agreed that a number of inputs selected were appropriate: (1) mass of the particulate matter emissions and (2) base elevation.⁶ He also agreed with Mr. Auberle that 13 meters is a good estimate of the tank height.⁷ Dr. Zannetti also testified that he is “not competent in estimating the temperature from a fire” and thus was offering no critique on Mr. Auberle’s use of 737 Kelvin as the input for the emissions temperature.⁸

Thereafter, Mr. Auberle concluded and opined:

5.1 Approximately eight and one - half million pounds of particulate matter were released to the atmosphere from fires at Intercontinental Terminals Company in March 2019.

5.2 Particulate matter from the fires at ITC dispersed over a wide area.

5.3 Deposition of particulate matter was highest near the fires.

² Notably, Mr. Auberle was also retained to model the dispersion and deposition of the Arkema plant fires in Crosby, Texas. He utilized AERMOD for the modeling and his isopleths were used to form the basis of the class area accepted by Judge Ellison. *See Prantil v. Arkema Inc.*, Doc. 316, Civil Action 4:17-CV-02960 (S.D. Tex. May 18, 2022), *affirmed* Case 22-90030 (5th Cir. July 20, 2022).

³ *See* Exhibit A (Auberle Report) at pg. 4.

⁴ <https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models>

⁵ *See* Exhibit A (Auberle Report) at pg. 3.

⁶ *See* Exhibit B: Deposition Transcript of Dr. Paolo Zannetti at pg. 237:6-22.

⁷ *See* Exhibit B (Zannetti deposition transcript) at pgs. 237:23-238:7.

⁸ *See* Exhibit B (Zannetti deposition transcript) at pg. 238:8-21.

5.4 Residents and others present during the fires were exposed to multiple air pollutants including PM_{2.5}.

5.5 Greatest exposures to air pollutants from the fires occurred near the ITC facility.

5.6 Subsequent to the fires, atmospherically re-entrained pollutants likely resulted in additional human exposures from pollutants' atmospheric dispersal.

5.7 Local meteorological conditions during and after the fires influenced the distribution of air pollutants, including the ambient air concentrations and mass of particle deposition, as shown in [the attached isopleths] Figures 1 and 2.⁹

The modeling resulted in 2 figures used by Plaintiffs for their proposed class certification: (1) a figure depicting the ambient air concentrations of PM_{2.5} of 35 micrograms per cubic meter and 70 micrograms per cubic meter averaged over a 24-hour period (Figure 1 of the Auberle report); and (2) a figure depicting the ground-level concentration of particles at a rate of one gram per square meter of surface area or greater (Figure 2 of the Auberle report—particulate matter deposition).¹⁰

II.

ARGUMENT

The issue presented by the Defendants' Motion is should the expert testimony and reports of Mr. Auberle be excluded for the purposes of determining class certification.

Under Federal Rule of Evidence 702, “a qualified expert may testify in the form of an opinion if: (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.”

⁹ See Exhibit A (Auberle Report) at pg. 5.

¹⁰ See Exhibit A (Auberle Report) at Figure 1 and Figure 2.

This rule codifies the Supreme Court’s holding in *Daubert* that courts should serve a “gatekeeping” role in ensuring that only reliable expert testimony is admitted into evidence.¹¹ Specifically, *Daubert* instructs courts to consider factors including “whether the proposition is testable and has been tested; whether the proposition has been subjected to peer review and publication; whether the methodology has a known error rate; whether there are accepted standards for using the methodology; and whether the methodology is generally accepted.”¹²

Admissible expert testimony need only be reliable and relevant under *Daubert*.¹³ “Reliability” requires scientifically valid methodology and “relevance” requires it to be properly applied to the “facts in issue.”^{14, 15}

Factors to assist the Court’s evaluation of the expert’s testimony include “whether the theory or technique the expert employs is generally accepted; whether the theory has been subjected to peer review and publication; whether the theory can and has been tested; whether the known or potential rate of error is acceptable; and whether there are standards controlling the technique’s operation.”¹⁶ However, “the factors identified in *Daubert* may or may not be pertinent in assessing reliability. . . .”^{17, 18} “[T]he *Daubert* analysis is a ‘flexible’ one”¹⁹

The expert opinion is not required to be known to a certainty, but it should be derived from the scientific method, and it “must be supported by appropriate validation—i.e., “good

¹¹ *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993).

¹² Kenneth S. Brown, et al., *McCormick on Evidence*, § 13 (7th ed. 2016).

¹³ *Wells v. SmithKline Beecham Corp.*, 601 F.3d 375, 378 (5th Cir. 2010)(citing *Knight v. Kirby Inland Marine Inc.*, 482 F.3d 347, 352 (5th Cir. 2007)).

¹⁴ *Id.* at 378 (citing *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592-93 (1993)).

¹⁵ *Knight*, 482 F.3d at 352 (citing *Daubert*, 509 U.S. 592-593).

¹⁶ *Wells*, 601 F.3d at 378-79 (citing *Knight*, 482 F.3d at 351).

¹⁷ *Burleson v. Texas Dept. of Criminal Justice*, 393 F.3d 577, 584 (5th Cir. 2004)(citing *Kumho Tire, Co. v. Carmichael*, 527 U.S. 137,150 (1997)).

¹⁸ *Pipitone v. Biomatrix, Inc.*, 288 F.3d 239, 245 (5th Cir. 2002).

¹⁹ *Pipitone*, 288 F.3d at 244 (citing *Kumho Tire*, 526 U.S. at 150).

grounds,” based on what is known.”²⁰ “A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.”²¹ Experts may extrapolate data when forming a reliable opinion, however they must be able to close the “analytical gap between the data and the opinion.”²²

To be admissible, the expert testimony does not have to be proven correct; rather, it must be proven reliable by a preponderance of the evidence by the proponent.^{23, 24} Furthermore, “[c]onflict among the expert testimony [is] grist for the jury.”²⁵ Importantly, here, while Defendants hired a self-professed expert in air modeling to critique Mr. Auberle’s work, he did not provide an opposing opinion on the level of emissions from the ITC fires, other than his guess that a substantial amount flew overhead, without considering the Fact Sheet database information demonstrating otherwise. Thus, the defense expert critique of Mr. Auberle is just so much hot air with no supporting analysis or modeling to support it, based as it is on cherry-picked information.

Here, Defendants’ objections to the opinions of Mr. Auberle do not undermine their fundamental reliability. At most, even if accepted as valid, they merely relate to the weight of the opinions. Consequently, the Court should deny Defendants’ Motion.

A. Summary of Arguments

Contrary to Defendants’ self-serving attempt to set a higher legal standard for Plaintiffs’ case, this is not a personal injury case. Likewise, Mr. Auberle’s opinion is not in support of a

²⁰ *Moore v. Ashland Chemical Inc.*, 151 F.3d 269, 275 (5th Cir. 1998)(citing *Daubert*, 509 U.S. at 589-90).

²¹ *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

²² *Johnson v. Arkema, Inc.*, 685 F.3d 452, 460-61 (5th Cir. 2012)(quoting *Joiner*, 522 U.S. at 146).

²³ *Moore v. Ashland Chem. Inc.*, 151 F.3d at 276 (5th Cir. 1998)(citing *In re Paoli R.R. Yard PCB Litigation*, 35 F.3d 717 (3rd Cir.1994); *see also* 2 Stephen A. Saltzburg *et al.*, Federal Rules of Evidence Manual 1229-40 (7th ed.1998).

²⁴ *Paz v. Brush Engineered Materials Inc.*, 555 F.3d 383, 388 (5th Cir. 2009).

²⁵ *Carroll v. Morgan*, 17 F.3d 787, 790 (5th Cir. 1994)(where disagreement regarding the cause of the plaintiff’s death among experts was not sufficient to disqualify an expert).

personal injury case. His opinion is offered for the purpose of establishing Defendants' interference with Plaintiffs' use of property, their property damage and the annoyance and inconvenience they suffered when Defendants polluted the ambient air with burning naphtha (a flammable liquid hydrocarbon mixture), xylene (a solvent and cleaning agent), GBS (gas blend stock, a complex mixture of hydrocarbons), and lubricant oils (a complex mixture of low and high molecular weight hydrocarbons). This resulted in shelter-in-place orders due to the health concerns for residents, including the widespread closure of businesses and schools during that time.

B. Mr. Auberle's opinions are relevant and reliable.

Mr. Auberle bases his opinions on his over fifty years of experience in atmospheric dispersion modeling as an environmental engineer, including his academic, regulatory, and consulting careers in air quality management and air pollution monitoring and modeling.²⁶ In his report, he explains the basis of using the widely accepted AERMOD program²⁷ for deposition modeling. As explained more in-depth later, he did not rely upon the unreliable and inappropriate sampling measurements that were taken well outside the affected area of the ITC fire or collected by problematic sampling methods that Defendants' proffered expert Dr. Zannetti relies upon to critique Mr. Auberle's work. The basis of the isopleth used to define the class is particulate matter deposition. None of the data collected during this fire and relied upon by Defendants to critique Mr. Auberle's reliability included particulate matter deposition measurements.²⁸ Notably, Dr. Zannetti does not proffer a deposition model of his own.

²⁶ See Exhibit A (Auberle Report) at pg. 2.

²⁷ AERMOD is one of the EPA's preferred and recommended dispersion modeling programs: <https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models>

²⁸ See Exhibit C: Deposition transcript of William Auberle at pgs. 238:21 - 239:1.

1. AERMOD is an accepted and reliable modeling program for modeling the ITC fire emissions.

In the Motion to Exclude, the Defendants repeatedly describe Mr. Auberle's AERMOD modeling as flawed. However, this assertion lacks any foundation or support. "AERMOD, [is] an EPA-approved modeling algorithm that accounts for wind direction, wind speed, temperature, humidity, precipitation, and certain obstructions to estimate where the wind blew particles." *Freeman v. Grain Processing Corp.*, 895 N.W.2d 105, 111 (Iowa 2017). In fact, AERMOD is the EPA's preferred air dispersion model.²⁹ The Code of Federal Regulations also addresses the designation of AERMOD.³⁰ AERMOD is a designated model to be used for PM_{2.5}.

Using AERMOD, Mr. Auberle explained that the base elevation, emissions release height, emissions temperature, and PM_{2.5} fraction factors were used to estimate the conditions during the time that the over 8.6 million pounds of particulate matter were released by Defendants during the fires.³³ Using the AERMOD algorithm, isopleths were developed showing mapped areas of dangerous levels of airborne PM_{2.5} and deposited particulate matter.

Mr. Auberle explained that he used AERMOD because it is a "useful modeling platform for many applications, including here."³⁴ He explained that fires are one of the many applications for which AERMOD is used after discussing a number of other air modeling tools that are also available.³⁵ Because Mr. Auberle was modeling deposition from the fire event, he selected AERMOD as the best tool for the application of particulate matter deposition in neighborhoods impacted by the fires that raged from the ITC facility. Again, Defendants take his deposition testimony out of context by claiming that he didn't properly consider other

²⁹ <https://www.epa.gov/scram/aermod-modeling-system-development#:~:text=In%20November%202005%2C%20the%20EPA,model%20for%20many%20regulatory%20applications.>

³⁰ 40 CFR Appendix W to Part 51 3.03.1 & 40 CFR Appendix W to Part 51 4.04.2a.

³³ See Exhibit A (Auberle Report) at pg. 4.

³⁴ See Exhibit C (Auberle deposition transcript) at pg. 59:4-5.

³⁵ See Exhibit C (Auberle deposition transcript) at pgs. 57-59.

modeling platforms, even though he responded to questions about other modeling platforms available and why AERMOD was the superior choice.

Defendants seem to suggest that AERMOD itself is not a reliable tool and should, as a matter of law, be excluded from expert testimony. This argument simply is unfounded. Courts have repeatedly admitted and relied upon expert testimony using AERMOD. *See Prantil v. Arkema Inc.*, Doc. 316, Civil Action 4:17-CV-02960 (S.D. Tex. May 18, 2022), *affirmed* Case 22-90030 (5th Cir. July 20, 2022), *Hamilton v. 3D Idapro Sols., LLC*, 18-cv-54-jdp (W.D. Wis. Aug. 1, 2019)(denying cert for lack of an AERMOD model); *Freeman*, 895 N.W.2d at 111 (relying on AERMOD results to define class area); *Ponca Tribe of Indians of Oklahoma v. Cont'l Carbon Co.*, No. CIV-05-445-C, 2007 WL 28243, at *3(W.D. Okla. Jan. 3, 2007) (“the geographic scope of the class was determined by their experts based on the degree of pollution deposited on the land.”).

Mr. Auberle considered various air modeling tools and then selected the tool that, based on his experience and expertise, was most appropriate for the situation. As an expert in his field, he relies upon a tool developed by and used by other experts in his field. He explained why the inputs used by AERMOD were correct and how AERMOD utilizes each of the various factors raised by Defendants. He used the tool for the purposes that his testimony is proffered—the interference with the loss of use of property and annoyance and inconvenience suffered by Plaintiffs from the fires.

To the extent that Defendants have critiques in the assumptions Mr. Auberle relies upon in forming his expert opinion, this is grist for the jury. Defense expert Dr. Zannetti repeatedly testified that he and his staff were capable of replicating Mr. Auberle’s work in AERMOD. Indeed, that replication both confirms Mr. Auberle’s proper methodology in using AERMOD

and informs the defense critique of the work. Criticizing a properly deployed scientific methodology routinely serves as the basis for the “battle of the experts.”

2. Mr. Auberle utilized multiple inputs based upon environmental engineering principles and expertise.

Taking Mr. Auberle’s deposition testimony out of context, Defendants claim that AERMOD only utilizes the four factors stated above to estimate conditions during the fire. However, in his deposition, Mr. Auberle explained point-by-point that AERMOD takes into account much more than that. In addition to the specific inputs argued by Defendants and addressed in sections a-c below, Mr. Auberle addressed other specific scientifically justified inputs. He explained that plume rise is influenced by atmospheric conditions and that AERMOD uses meteorological data to calculate this feature.³⁶ He explained that the temperature input in AERMOD addresses convection that could be created by the fire itself, which Defendants’ expert erroneously claimed Mr. Auberle had not taken it into account.³⁷

Mr. Auberle explained that when he modeled the deposition from the ITC fire, using his professional judgment, he selected inputs that would result in a “cautious” or conservative estimate.³⁸ He did not select inputs that would result in the largest possible deposition class area, even though the emissions would have been in close proximity to that part of the ITC facility and would have resulted in a model with greater impacts to the community.³⁹ Instead, because the fire raged in a dynamic and not static event, he chose the centroid of the tank farm area (rather than the outer perimeter) and an estimated number of tanks on fire that were raging at a time, which was seven instead of the entire thirteen tanks that burned and were destroyed.⁴⁰ After he

³⁶ See Exhibit C (Auberle deposition transcript) at pg. 87.

³⁷ See Exhibit C (Auberle deposition transcript) at pg. 89.

³⁸ See Exhibit C (Auberle deposition transcript) at pgs. 83:9-25 & 84:1-18.

³⁹ See Exhibit C (Auberle deposition transcript) at pgs. 84:19-25 & 85:1-4.

⁴⁰ See Exhibit C (Auberle deposition transcript) at pg. 138:8-20.

explained this, he said, “I could have used a different number. I just thought that was a reasonable approximation of the conditions.”⁴¹ Using his professional experience, expertise, and understanding of the AERMOD algorithm inputs, Mr. Auberle chose the factors that would best approximate a non-static fire event that continuously changed as the fire continued to burn for over sixty-five hours, resulting in the destruction of fifteen tanks with different chemical contents.

a. Mr. Auberle’s selection of stack diameter and configuration is scientifically justified.

Defendants make a number of arguments that are not grounded in science or reality in arguing that Mr. Auberle should have ignored his experience and expertise to utilize the AERMOD tool. Defendants suggest that Mr. Auberle should have treated fires raging from large storage tanks—tanks that burned to the ground during the fires—as if they were traditional stacks that have mechanical fans to force pollution out of the stack, increasing exit velocity and plume height. However, fires were not being propelled by a mechanical force, such as fans. This fire was not like a set of traditional stacks regulated under the Clean Air Act, did not have mechanical fans, and thus, should not be modeled as if they did. Instead, Mr. Auberle treated the plumes of smoke coming from these storage tanks with the minimum amount of exit velocity available under AERMOD because of this lack of mechanical fans, using not only his expertise but also reflecting the reality of the situation during the large-scale fires without a mechanical propulsion source.⁴² Dr. Zannetti claims that Mr. Auberle’s exit velocity is too low but admits he cites to no authority to support that criticism, saying, “It’s only based on the observation that the plume is moving up very quickly.”⁴³

⁴¹ See Exhibit C (Auberle deposition transcript) at pg. 138:17-20.

⁴² See Exhibit C (Auberle deposition transcript) at pgs. 133:18-25 & 134:1-15.

⁴³ See Exhibit B (Zannetti deposition transcript) at pg. 222:22-25.

Defendants attempt to create an issue of stack diameter in Mr. Auberle's modeling. Again, the tanks are not stacks as used in Clean Air Act regulations. Mr. Auberle used the diameters to approximate the changing dynamics of the fires as they burned. Again, because the tanks were not stacks with mechanical fans, basing stack diameter as if they were would be contrary to the reality of the fire. Moreover, when asked why he didn't treat the tanks as one large stack, Mr. Auberle explained that it was a very dispersed source. He used a conservative approximation to reflect the reality of the fire.

Defendants posit a number of unrealistic and unsupported "inputs" to argue that Mr. Auberle failed to perform "sensitivity analyses." Rather than give realistic situations as critiques to Mr. Auberle's expert opinion, Defendants have thrown a veritable kitchen sink of concepts—many of which are not based at all on the reality of the fire—and then challenge Mr. Auberle for his failure to entertain unrealistic situations, claiming it is sensitivity analysis. Moreover, as discussed above, when he explains why specific inputs are inappropriate or that his analyses result in a more conservative calculation, Defendants ignore it without any explanation.

As discussed above, the tanks were not stacks with mechanical fans venting pollution. The fire did not merge into one large stack. The tank heights changed throughout the course of the fire until the tanks burned to the ground. The fire was not a neat, controlled release event that should be modeled as though it were a coal-fired power plant stack in a Clean Air Act permit application. Instead, Mr. Auberle based his expert opinion on approximations to best reflect the realities of the situation of fifteen tanks burning and sending particulate matter into the communities surrounding the ITC facility. Mr. Auberle's approximation is grounded in science and is based on his expertise not only in AERMOD, but also in the realities of the situation created by ITC's fifteen tanks burning to the ground over a period of sixty-five hours.

b. Mr. Auberle's selection of emissions temperature is based upon the reality of the fire and results in a more conservative dispersion estimate.

There are over four separately identified chemical compounds that burned at the ITC facility during the sixty-five hour fire. These were not uniform chemicals or mixtures. Mr. Auberle explained that he based the emissions temperature on the identified chemical with the highest ignition temperature—xylene.⁴⁴ Because the fire was not a controlled, uniform event, he selected a reasonable approximation of the emission temperature.⁴⁵ Mr. Auberle explained that the higher the temperature, the more the fire would consume, thus resulting in reduced, or conservative, emissions values. This is again, a more conservative, cautious approach because using that temperature increased the height of the resulting plume, resulting in more dispersion and less deposition in the neighborhoods near the ITC facility.

Further, Defendants' own expert Dr. Zannetti was unable to offer any critique of Mr. Auberle's choice of 737 Kelvin for the emissions temperature because he is admittedly "not competent in estimating the temperature from a fire."⁴⁶

3. Mr. Auberle established a scientific basis for using modeling rather than the limited samples due to distance and time.

Defendants urge this court to exclude Mr. Auberle as an expert in part because he did not rely upon what they claim are hundreds of PM_{2.5} data points from TCEQ and thousands of "additional instantaneous readings" from CTEH. However, Defendants utterly ignore the weaknesses of those data points as discussed by Mr. Auberle—the distance from the fire and the readings were limited to the short periods of time when the air was sampled.

⁴⁴ See Exhibit C (Auberle deposition transcript) at pgs. 129:7-25 & 130:1-16.

⁴⁵ See Exhibit C (Auberle deposition transcript) at pg. 132:11-15.

⁴⁶ See Exhibit B (Zannetti deposition transcript) at pg. 238:8-16.

Significantly, Defendants reference sampling sites that measured pollutants other than PM_{2.5}, including VOCs, NO_x, and benzene,⁴⁷ which are not appropriate data for PM_{2.5} calculations—they not the same pollutants as PM_{2.5}. Moreover, Mr. Auberle could not have used any of that sampling data for particulate matter deposition calculations because there were no particulate matter deposition measurements.⁴⁸ They also rely on PM_{2.5} measurements that Mr. Auberle explained have little to no utility due to their limited duration and distance in calculating the PM_{2.5} isopleth; he explained why he did not alter his model due to the modeling data described by Defendants:

*Well, there are methodologies for doing model validation, maybe even if properly designed model calibration, and that's done by those who are designing models and the various input parameters to those models. The information that we have here from a few monitoring points don't approach what's necessary to do any kind of model calibration or model adjustments. It's just not appropriate in this case.*⁴⁹

Dr. Zannetti's deposition testimony further establishes the problems with the data that Defendants argue Mr. Auberle should have used. As discussed in the Plaintiffs' Motion to Exclude Opinions and Testimony of Defendants' Expert Dr. Paolo Zannetti, Dr. Zannetti agreed and testified that the data from the PurpleAir monitors are not used for regulatory purposes, and EPA does not accept results from those monitors.⁵⁰ Despite urging that Mr. Auberle needed to rely on this data, Dr. Zannetti admitted that he didn't know if the PurpleAir monitors needed to be calibrated or cleaned to correctly perform or if extreme weather impacts the performance.⁵¹

Many additional PM_{2.5} measurements have issues with the distance from the ITC facility, as more fully explained in Plaintiffs' motion to exclude defense expert Dr. Zannetti. The PM_{2.5}

⁴⁷ See Exhibit D: TCEQ Report July 3, 2019 at pg. 8.

⁴⁸ See Exhibit C (Auberle deposition transcript) at pgs. 238:21 - 239:1.

⁴⁹ See Exhibit C (Auberle deposition transcript) at pgs. 235:25 - 236:7.

⁵⁰ MTE Zannetti (Doc. 1305-1) at pg. 11.

⁵¹ MTE Zannetti (Doc. 1305-1) at pg. 11.

measurements taken too far away from the fire are inappropriate to use as measurements for neighborhoods and communities within the area impacted by PM_{2.5} pollution because the samples from outside the impacted area were “quite some distance from the fire,”⁵² resulting in lower concentrations of PM_{2.5} the farther from the fire the location was.⁵³ Moreover, these PM_{2.5} samples are only potentially accurate for the exact time and location that the sample is taken.⁵⁴ In its report on the ITC fire, TCEQ stated, “Locations of the monitors varied in distance to the ITC fire, and are not necessarily representative of the exposures among the entire population.”⁵⁵ It further cautioned about its own sampling data, “The closest monitor was approximately 2.75 miles away from the ITC facility. Persons closer to the facility such as workers and emergency response staff could have been exposed to greater concentrations.”⁵⁶

Knowing that these issues impact the scientific reliability of any air modeling of the event, Mr. Auberle did not rely on these samples.⁵⁷ Instead, he used AERMOD, which is designed for the purpose of modeling particulate matter deposition and PM_{2.5} pollution over time and space. This approach is appropriate and justified, whereas relying solely on the problematic air samples to generalize air quality in the class area is not. This is why he stated that he “didn’t see any data that were useful for that purpose.”⁵⁸

4. Mr. Auberle selected the deposition threshold based upon the purpose of establishing Defendants’ interference with the Plaintiffs’ use and enjoyment of their properties and the annoyance and inconvenience of the pollution from the fires.

⁵² See Exhibit C (Auberle deposition transcript) at pgs. 238:21 - 239:1.

⁵³ See Exhibit D (TCEQ Report) at pg.8.

⁵⁴ See Exhibit C (Auberle deposition transcript) at pg. 201:18-23.

⁵⁵ See Exhibit D (TCEQ Report) at pg.8.

⁵⁶ See Exhibit D (TCEQ Report) at pg.8.

⁵⁷ See Exhibit C (Auberle deposition transcript) at pg. 121:3-8.

⁵⁸ See Exhibit C (Auberle deposition transcript) at pg. 121:3-8.

Mr. Auberle explained that he selected the 1 gram per square meter threshold for particulate matter based upon his experience that this deposition would be visible on a horizontal surface, which is directly related to the claims asserted by Plaintiffs for their property claims.

Q. So let's talk about the 1 gram per square meter as a metric. Why did you decide on 1 gram per square meter?

A. Two considerations. One, I have analyzed fires and other sources in deposition of particles in other cases, and, typically, at much lower emissions and at much lower deposition rates. This value is more than demonstrably visible and impactful on a surface -- on any horizontal surface, one. And, two, I think I was aware that, ultimately, this was going to be -- likely to be a class action litigation, and having lower values than this would have been, in my experience, almost unwieldy.

Q. Because it would have created such a large area?

*A. Yes.*⁶¹

He did not select the threshold based on creating an isopleth to fit the class action, as Defendants suggest. He knew that the class action was for property claims and selected the threshold that correlated to visible particulate matter deposition on surfaces.

Q. So you said in your view, 1 gram per square meter is visible on surfaces. What is your basis for that statement?

*A. My experience in modeling and measurements in other cases, other circumstances.*⁶²

In addition to basing the threshold on visible dust, he also selected a conservative or cautious threshold. Furthermore, Plaintiff Fact Sheets report experiences consistent with Mr. Auberle's opinions regarding the isopleth.

5. Mr. Auberle is qualified to offer expert opinions on loss of use of property and annoyance and inconvenience.

⁶¹ See Exhibit C (Auberle deposition transcript) at pg. 171:1-15.

⁶² See Exhibit C (Auberle deposition transcript) at pg. 171:16-20.

Mr. Auberle is a licensed engineer specializing in environmental engineering or air pollution modeling.⁶³ He is a board-certified environmental engineer by the American Academy of Environmental Engineers and Scientists.⁶⁴ Mr. Auberle also has over fifty years of experience in atmospheric dispersion, including regulatory, consulting, and academic experience. *See curriculum vitae* of William Auberle which was Appendix A to his expert report and Exhibit 2 to his deposition transcript. Defendants continue to conflate the concepts of personal injury and loss of use of property in an attempt to set a different standard in order to exclude the testimony of Mr. Auberle. He does not have to be a toxicologist. He does not have to be a human health expert. He is not attempting to establish himself or proffer testimony of either. Plaintiffs are not proffering his expertise as such. His expert opinion is to establish the deposition of particulate matter that resulted in Plaintiffs' loss of use and enjoyment of their properties and annoyance and inconvenience as the fires sent plumes of particulate matter over the proposed class area, resulting in particulate matter deposition.

III.

CONCLUSION

Under the Federal Rules of Evidence and *Daubert*, an expert opinion must be relevant and reliable. Mr. Auberle is an environmental engineer with over fifty years of experience in atmospheric dispersion, including regulatory, consulting, and academic experience. He is experienced in using AERMOD to calculate the area of deposition of particulate matter in air pollution events like this one. He is qualified to offer his expert opinions for this purpose. Mr. Auberle's opinions are relevant and reliable because he properly utilized the AERMOD model with supported assumptions. Defendants merely attempt to nitpick Mr. Auberle's air modeling

⁶³ *See* Exhibit A (Auberle Report) at pg. 2.

⁶⁴ *See* Exhibit C (Auberle deposition transcript) at pg. 44:9-16.

analysis in the case, and they argue the weight of the evidence, which are insufficient bases to exclude an expert witness. For the foregoing reasons, this Court should deny Defendants' [1309] Motion to exclude Mr. Auberle and Plaintiffs request a hearing on this matter.

DATED: October 7, 2022

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CERTIFICATE OF SERVICE

I hereby certify that on October 7, 2022, I served a true and correct copy of the foregoing document upon counsel of record by using the Court's ECF service in compliance with Federal Rule of Civil Procedure 5 and Local Rule 5.1:

Respectfully submitted by
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